

Notice of Allowability

Application No.

10/644,752

Applicant(s)

ENOMOTO, SHIGEO

Examiner

Pritham Prabhakher

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 08/21/2003.
2. ☒ The allowed claim(s) is/are 1-5.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date See Continuation Sheet | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

Continuation of Attachment(s) 3. Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date: 11/21/2003 and 03/02/2004.

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statements (IDS) submitted on 11/21/2003 and 03/02/2004 have been considered by the examiner. The submission is in compliance with the provisions of 37 CFR 1.97.

Allowable Subject Matter

Claims 1-5 are allowed.

The following is an examiner's statement for reasons for allowance:

In regard to independent **Claim 1**, the prior art of record fails to teach or reasonably suggest "A digital camera comprising: a solid state imaging device that has a light receiving surface, and is provided with an optical low-pass filter; a photographing optical system that forms an object image on said light receiving surface through said optical low-pass filter; and a storing unit that stores an electronic-charge accumulation-time control program for determining optimum exposure parameters according to which a photography is performed through said photographing optical system and said solid state imaging device, said electronic-charge accumulation-time control program having a program diagram showing a relationship between an electronic-charge accumulation-time and an aperture value and/or an ISO speed, said program diagram having at least one bending point at which said program diagram is bent;

said electronic-charge accumulation-time T at a bending point which is close to the lowest luminous value of said program diagram satisfying the following formula, when a film-converted pixel pitch $p(\mu m)$ of said solid state imaging device, which is defined by dividing a width of a photographing film by the number of pixels arranged in a horizontal direction of said light receiving surface, satisfies $4p \geq 60$;

$$1/(fc \times (60/4p)) \geq T \geq 1/fc$$

wherein fc indicates a film-converted focal length (mm), with which, when said light receiving surface is enlarged to an area of said photographing film, said object image is formed on the enlarged area with the same angle of view as that for said photographing film."

Regarding **Claims 2-5**, these claims are allowed as being dependent from allowed independent claim 1.

The following are the closest references found:

Higashihara et al. (US Patent No.: 6473126B1) discloses a focus detecting device for detecting images from different pupil areas on time-shared basis, and detecting the phase difference of the images from the different areas, thereby detecting the defocus amount, is described. The focus detecting device of this type is incapable of exact defocus amount detection, because of the influence of the relative movement

between the object and the photographing optical system. The exact defocus amount can be determined by detecting images from a same pupil area on time-shared basis, determining the phase difference between such images and effecting correction corresponding to the phase difference between the images from the same pupil area.

Sugahara et al. (US Patent No.: 6778210B1) *discloses an image pickup apparatus including: CCD image pickup device; a preprocess circuit for generating image signals based on output of the image pickup device; a CCD driver for controlling charge accumulation time at the image pickup device; a pickup image generating section for generating one pickup image signal by means of addition of a plurality of image signals obtained by rendering a plurality of times of consecutive exposure by controlling the CCD driver; a blur correcting section for, in generation of the pickup image, adding a plurality of image signals after compensated for relative motion among said plurality of image signals; and an image blur detecting section for detecting relative motion information among the plurality of image signals on the basis of said plurality of image signals, wherein compensation processing at the blur correcting section is performed on the detection result at the image blur detecting section.*

Conclusion

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pritham Prabhakher whose telephone number is 571-270-1128. The examiner can normally be reached on M-F (7:30-5:00) Alt Friday's Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571)272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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DAVID OMETZ
SUPERVISORY PATENT EXAMINER